

2 Year Business Plan 2017-2018 Electric Distribution

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Administration | Engineering |
Metering and Customer Service | Operations | Stations



DEPARTMENTAL OVERVIEW

Electric Distribution's focus is to distribute electrical energy to customers in a safe and reliable manner, providing a rate advantage and delivering a financial return that is in keeping with Alberta Utilities Commission's principles enabling us to pay 6.25% of equity dividend.

SERVICES PROVIDED BY THE DEPARTMENT INCLUDE:

Electric Distribution provides the following lines of services:

1. Electrical engineering and construction
2. Designing of electrical services
3. Meter installation, maintenance and testing
4. Electrical infrastructure upgrades and maintenance.

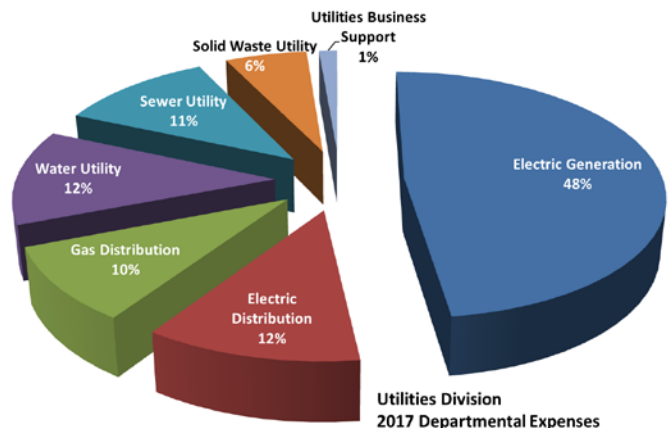


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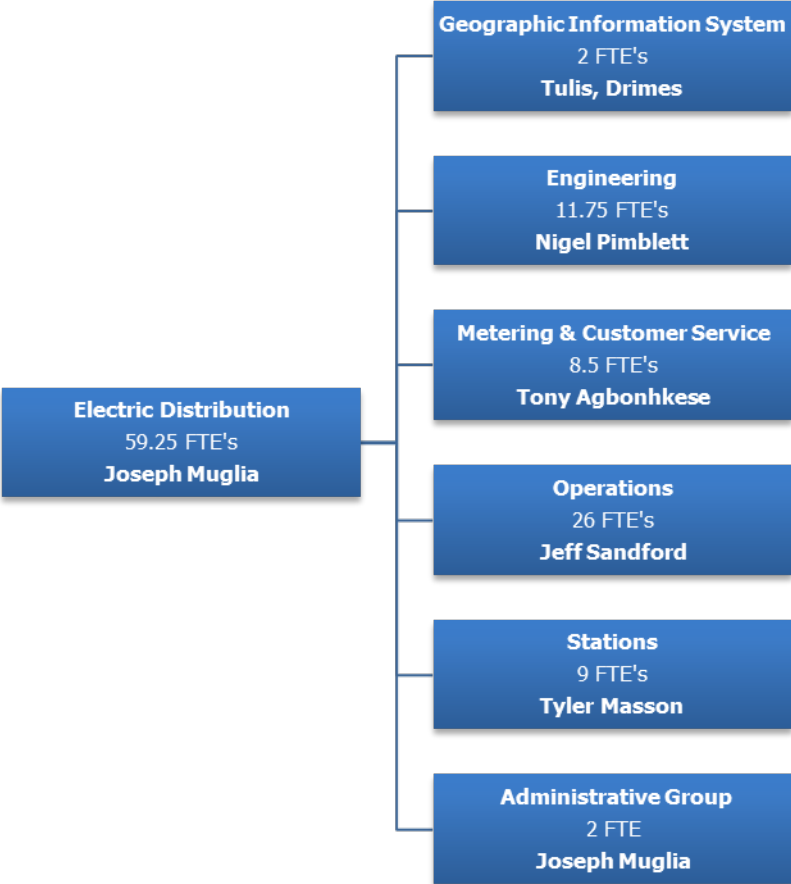
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DEPARTMENT OVERVIEW

Corporate Mission Statement

“Deliver value through exceptional public service.”

Organizational Chart



Core Services & Customers

Electric Distribution's core services include:

- Electrical Design and Construction
- Meter Installation, Maintenance and Testing
- Electrical Infrastructure Upgrades and Maintenance
- Asset Management and Critical Asset Health Indexing.

Our primary customers are:

1. Residential, Commercial and Industrial customers
2. Developers and Contractors
3. Alberta Infrastructure and Transportation
4. CMH Departments, Town of Redcliff and Cypress County.

2015/2016 Electric Distribution Service Highlights & Achievements

1. Health and Safety

- No reportable, disabling or lost time injuries.
- Completed 95.7% of safety regulatory training equating to 2,457 hours.
- Completed 4 emergency response drills.

2. Work Efficiencies:

- Created a "free wall" inventory system for low value, commonly used items for maintenance purposes leading to increased crew efficiencies.
- Created a material staging area to ensure material availability and increased crew efficiency.
- Implemented a new system for setting inventory minimum and maximum levels base on Economic Order Quantity (EOQ) and reorder point for materials. This system will ensure that inventory levels are set at the most economical levels to reduce over/under stocking of materials.
- Successful deployment of an Outage Management System (OMS).

3. Development:

- Completed Electric Distribution restructuring to create improved integration between groups to better serve the community.
- Completed the 2015 and 2016 substation maintenance program as part of the 5 year equipment maintenance plan. The completion of this program rejuvenated field assets to mitigate failures and also reduces the cost related to an oil spill cleanup should a catastrophic transformer event occur.
- Installed new recloser as part of the Electric Distribution asset renewal and modernization.
- Replaced the downtown 600 volt network which increases reliability due to significant asset renewal.
- Completed the Box Springs Business Park underground cable, related infrastructure and street light installation.
- Completed the relocation of the transmission line for Box Springs Business Park.

- Completed new 23rd Street distribution feeder system with SCADA (Supervisory Control and Data Acquisition) controlled switchgear, allowing switching between three different feeders.
- Installed 179 new services and 136 temporary services.
- Completed 83 service upgrades in coordination with homeowners.
- Completed the application process with the Alberta Utility Commission (AUC) for the new tie with Alberta Interconnected Electrical System (AIES).

Significant Issues and Trends

- Increased system monitoring as first step towards a 'smart grid' system. This includes the addition of fault indicators, transmission line monitors and online substation transformer dissolved gas analysis (DGA) to help increase visibility.
- A decrease in the average age among Powerline staff within the department. This poses a critical concern for our department as it can potentially lead to a loss of institutional knowledge.
- Legacy field equipment such as porcelain cutouts on poles are causing outages and sometimes resulting in property damage. An upgrade program has been initiated and will begin in 2017 to address concerns.
- As a result of increased buried utilities in proximity to electric right of ways, stringent OH&S regulations and increased departmental safety awareness/education, vacuum excavation costs have increased for installation services, pole replacements and general excavation in proximity to other buried utilities
- Work related to transmission line upgrades and new substations - Switching and providing a guarantee of isolation outside regular working hours adds to the departmental operation cost. This is expected to continue until the transmission upgrades are complete.
- With high inventory holding costs, manufacturers now build materials as ordered which increased lead time.
- Fluctuating Canadian dollar value increases challenge to keep within budget as most capital materials/assets are purchased from the US.
- Electric Distribution continues to promote training for both long term staff and new.
- Industry trends indicate an investment into smart technologies in distribution systems to reduce outage times. This option is currently being considered by the Electric Distribution department.
- While health and safety training within the Utility has increased, there is a need for a formal competency evaluation process.

CURRENT STRATEGIES AND ACTION PLANS

Business Plan Assumptions:

- The City of Medicine Hat (CMH) Electric Distribution System and customers located in the service area of CMH will continue to maintain exemption from all requirements of Part 7 of the Electric Utility Act (EUA).
- The CMH Electric Transmission facilities within the service area of CMH will remain separate from inclusion in the Alberta Interconnected Electric System (AIES).
- On average, annual load growth is expected to be 1.0% and annual customer growth is expected to be 0.8%.
- Receive Cost of Service (COSA) plus a return on equity comparable to the Alberta Utilities Commission (AUC) standards.
- Completion of the CMH internal transmission upgrades (69kV to 138kV) will occur within the 2017-2018 budget cycle.
- Establish new AIES location and associated substation equipment that addresses the SIGMA Enterprise Risk Study.
- Automated Metering Infrastructure (AMI) is fully functional and will create opportunities for both system and customer improvements.
- Move to best-in-class operational construction standards.
- No major penetration by distributed energy resources (DER) greater than 1MW. For example residential solar, etc.
- 0% inflation rate for labour and materials in 2017.
- Current market unit pricing.
- No increase in FTE count in 2017 and 2018.
- Implementation of a new business model for shallow utilities.

Strategies:

1. Encourage employee growth and development in order to provide exceptional customer service and ensure a safe and reliable system.
2. Optimize effective asset management and resource planning to ensure cost effectiveness to address future needs.
3. Keep up-to-date by monitoring/assessing best practices and new technologies within the Electric industry.
4. Identify further industry service measures to enhance current performance benchmarks.

Goal: Deliver electrical energy to customers within the City’s service area at market comparable rates, while meeting or exceeding Industry standards.

Priorities for Service Enhancement or Improvement:

1. Continue to maintain rates and services that offer a competitive advantage.
2. Establish service levels that are comparable to industry standards.
3. Build on a collaborative relationship with customers and developers.
4. Promptly execute on new customer connections

#	SP Ref	KR Ref	Strategic Priority / Key Result / Action Plans	Who	When
ECONOMIC DEVELOPMENT					
1	1	n/a	Assess rate competitiveness based on other Utilities	Distribution Manager / UBS	Quarterly
2	1	n/a	Reliability performance within the top quartile performance of urban Utilities	Engineering / Operations	Monthly
3	1	n/a	Meet with large industrial clients to coordinate outages and maintenance	Engineering / Operations	Biannual
			Perform power quality assessment on customer’s request	Metering	Quarterly
4	1	n/a	# of completed new customer connections within agreed timeframe	Engineering / Operations	Quarterly

Goal: Design, construct and maintain transmission and distribution electrical assets for the supply of electrical load to the City’s service area, while ensuring that the infrastructure will meet future system requirements.

Priorities for Service Enhancement or Improvement:

1. Continue distribution system maintenance programs.
2. Continue to execute on the asset management study to address infrastructure needs.
3. Complete construction of current transmission projects.
4. Continue to reassess transmission and distribution future asset requirements.

#	SP Ref	KR Ref	Strategic Priority / Key Result / Action Plans	Who	When
INFRASTRUCTURE AND AMENITIES					
1	2	2.1	100% execution on planned maintenance programs	Engineering / Operations / Stations	Quarterly
2	2	2.1	Complete the asset revitalization as proposed in 2017-2018 TCA budgets	Engineering / Operations / Stations	Quarterly
3	2	n/a	Monthly reporting on transmission projects & \$500k plus projects	Engineering	Monthly
			Attainment of completion date for 10L/20L project	Engineering	Q1 2017
			Attainment of completion date for AIES Tie relocation project	Engineering	Q3 2017
4	2	2.1	Annual reporting on transmission and distribution needs	Engineering	Yearly

Goal: Collaborate with other Distribution companies to promote synergies in operations, technology sharing and industry best practices while promoting the City.

Priorities for Service Enhancement or Improvement:

1. Increase information exchange with other distribution companies.
2. Continue to adopt and stay abreast of new technologies in the electric industry.

Goal: Optimize service levels in all areas of operations.

Priorities for Service Enhancement or Improvement:

1. Promptly execute on new customers connections.
2. Expedite resolutions to customer issues.

#	SP Ref	KR Ref	Strategic Priority / Key Result / Action Plans	Who	When
IMAGE AND PROFILE					
1	4	4.3	Attend Tri-municipal meeting	Distribution Team	Yearly
			Participate in at least 10 monthly Canadian AMI Sensus group meetings	Metering	Monthly
2	4	n/a	Attend at least 1 conference, 2 workshops or 6 webinars in related discipline	Distribution Team	Yearly
3	4	n/a	# of completed new customer connections within agreed timeframe	Distribution Manager	Quarterly
4	4	n/a	# of customer issues exceeding the 2 by 14 timeframe	Metering	Monthly

Goal: Identify and implement process improvement initiatives in order to reduce cost and improve efficiencies.

Priorities for Service Enhancement or Improvement:

1. Review, improve and formalize work flow processes to increase efficiency.
2. Continue to monitor inventory levels and returns.
3. Continue to derive benefits from AMI.
4. Integrate all Utility systems to increase the overall department efficiency.

#	SP Ref	KR Ref	Strategic Priority & Key Result & Action Plans	Who	When
FISCAL MANAGEMENT					
1	5	n/a	Full implementation and review of the new project planning process	Engineering	Q1 2017
			Review 4 departmental workflow processes	Engineering	Quarterly
2	5	5.1	Monthly reporting on inventory levels and returns	Engineering	Monthly
3	5	n/a	Implement AMI load limiting capability for electric meters	Metering	Q1 2017
4	5	n/a	Complete project on civic pin to meter locations for GIS to SCADA	GIS	Q2 2017
			Complete SCADA, GIS & AMI integration	GIS	Q2 2017

Goal: Maintain a high safety standard and environmental stewardship for both our employees and the public.

Priorities for Service Enhancement or Improvement:

1. Work with HS&E to improve contractor management process.
2. Continue to run safety & regulatory training.
3. Continue to monitor and reduce safety & environmental incidents.
4. Continue to educate the public on electric safety.

Goal: Maintain a constructive culture that promotes employee growth; ensuring that a multi-skilled workforce is continuously improved and maintained.

Priorities for Service Enhancement or Improvement:

1. Continue a succession planning and development process.
2. Continue to communicate regularly with all employees.
3. Continue to support employee competency training and exposure.
4. Continue to support the results of the employee engagement survey and make recommendations

#	SP Ref	KR Ref	Strategic Priority & Key Result & Action Plans	Who	When
CITY GOVERNMENT					
1	6	6.1	Create and implement new contractor management work flow process	Engineering / HS&E	Q1 2017
2	6	6.1	Complete 100% regulatory safety training & 4 emergency response drill	HS&E	Monthly
3	6	6.1	Maintain a TRIF lower than 3	HS&E	Yearly
			0 reportable environmental incidents	HS&E	Yearly
			Monthly building and site inspections with union member	Distribution Team	Monthly
			4 monthly site/field inspections per supervisor	Distribution Team	Monthly
4	6	n/a	10 hazard hamlet presentation to schools	Metering / Customer Service	Monthly
5	6	6.4	Succession plan created for each Electric Distribution department	Metering / Customer Service	Q4 2017
6	6	n/a	4 town hall information meetings to entire Distribution staff	Distribution Team	Quarterly
7	6	6.4	Create a position-specific training and development program	Metering / Customer Service	Q3 2017
			Monthly report on staff training	Distribution Manager	Monthly
8	6	n/a	Report on addressing the gaps identified regarding senior leadership	Distribution Manager	Quarterly

FINANCIAL PLAN SUMMARY & HIGHLIGHTS

Departmental Operating Revenues & Expenses Summary:

Revenues	Prior Year Actuals 2015	Current Year Budget 2016	2017 Operating Budget	2016-2017 Change	2018 Operating Budget	2017-2018 Change	2019 Operating Forecast	2020 Operating Forecast
Distribution Tariffs	12,715	13,655	15,844	2,189	18,363	2,519	18,871	19,385
Rechargeable Projects	1,521	1,434	1,343	(91)	1,439	96	1,741	1,757
Mobile Equipment	606	771	741	(30)	769	28	781	787
Administration Recovery	776	-	-	-	-	-	-	-
Miscellaneous Revenues	518	552	281	(271)	289	8	293	298
Total Revenues	16,136	16,412	18,209	1,797	20,860	2,651	21,686	22,227
Expenses								
Salaries, Wages & Benefits	4,845	4,817	4,629	(188)	4,702	73	4,886	4,993
Other Personnel Costs	164	123	182	59	183	1	179	182
Contracted Services	1,551	898	1,281	383	1,294	13	1,302	1,371
Materials & Supplies	935	1,025	1,021	(4)	1,030	9	1,056	1,054
Interdepartmental Charges	3,909	3,926	4,032	106	4,201	169	4,293	4,395
Taxes	643	662	724	62	737	13	752	767
Interest & debt	719	860	822	(38)	1,663	841	1,862	4,201
Amortization	1,648	2,281	2,835	554	3,875	1,040	4,092	1,843
Other	130	-	-	-	-	-	-	-
Total Expenses	14,544	14,592	15,526	934	17,685	2,159	18,422	18,806
Net Earnings /(Loss)	1,592	1,820	2,683	863	3,175	492	3,264	3,421
Permanent Positions		53	52	0	52	0	52	52
Dividend Contribution	926	965	929	(36)	1,039	110	1,173	1,303

Increases in the current year net operating expenses are primarily due to the following factors:

- | | |
|--|-----------|
| 1. Committed contractual services | \$383,000 |
| 2. Increased Interdepartmental charges | \$106,000 |
| 3. Amortization increase due to new capital projects | \$554,000 |

TCA Decision Package Summary

Refer to Attachment A for detailed information on each decision package.

2017-2018 TCA Decision Packages:*

Ref.	Year	Name	\$ Capital Cost	\$ Operating Impact**	Status
2.2.1	2017	13 KV Overhead Distribution System	1,255,000	(66,000)	Recommended
2.2.1	2017	13KV Underground Distribution System	2,599,000	(189,000)	Recommended
2.2.1	2017	Transmission	4,722,000	(135,000)	Recommended
2.2.1	2017	Substations	1,381,000	(87,000)	Recommended
2.2.1	2017	Fiber	220,000	(11,000)	Recommended
2.2.1	2017	New Distributed Services	515,000	(46,000)	Recommended
2.2.1	2017	Machinery & Equipment	430,000	(41,000)	Recommended
2.2.1	2017	Land Improvements	250,000	(17,000)	Recommended
2.2.1	2017	Buildings	5,630,000	(411,000)	Recommended
2.2.1	2018	13 KV Overhead Distribution System	1,505,000	(74,000)	Recommended
2.2.1	2018	13KV Underground Distribution System	1,049,000	(52,000)	Recommended
2.2.1	2018	Substations	621,000	(29,000)	Recommended
2.2.1	2018	Fiber	100,000	(5,000)	Recommended
2.2.1	2018	New Distributed Services	455,000	(40,000)	Recommended
2.2.1	2018	Machinery & Equipment	505,000	(49,000)	Recommended
2.2.1	2018	Buildings	1,400,000	(104,000)	Recommended
Total			\$22,637,000	\$ (1,356,000)	

2014-2018 COUNCIL STRATEGIC PRIORITIES AND KEY RESULTS

Strategic Priority 1:

Economic Development: We foster a sustainable, growing and diverse economy with a strong industrial base and a vibrant downtown.

Strategic Priority 2:

Infrastructure and Amenities: We have high quality, sustainable infrastructure and amenities, and a reputation for excellent management and maintenance.

Strategic Priority 3:

Social Wellness: A safe community that welcomes diversity and supports all citizens with high quality and accessible cultural, recreational and public services.

Strategic Priority 4:

Image and Profile: We promote our distinctive community and excellent quality of life to our citizens and the world.

Strategic Priority 5:

Fiscal Management: Responsible financial management focused on the long term ensures a sustainable city.

Strategic Priority 6:

City Government: The City increasingly stands out as a well-governed and well-organized municipal corporation with a positive corporate culture.

Strategic Priority 1: Economic Development Key Results

- **KR 1.1:** At least one more heavy industrial operator or major expansion of existing heavy industry occurs by December 2018.
- **KR 1.2:** A cohesive economic development strategy is completed and being implemented by December 2014.
- **KR 1.3:** The Downtown Revitalization Plan is funded and being implemented by June 2018.
- **KR 1.4:** Value added manufacturing and processing is increased by December 2016.

Strategic Priority 2: Infrastructure and Amenities Key Results

- **KR 2.1:** Improve and implement an asset management plan with attention to our deep utilities and transportation network by December 2016.
- **KR 2.2:** The flood mitigation plan is fully implemented by April 2016.
- **KR 2.3:** The percentage of renewable energy production and consumption increases relative to other business growth by September 2015 and thereafter

Strategic Priority 3: Social Wellness Key Results

- **KR 3.1:** The river valley is developed as an aesthetic, recreational feature and as a tourist attraction by December 2018 and thereafter.
- **KR 3.2:** Appropriate river valley commercial development increases by December 2018 and thereafter.
- **KR 3.3:** Meaningful engagement opportunities for youth are developed and implemented by December 2015 and thereafter.
- **KR 3.4:** Opportunities to enhance existing green space are identified and implemented by December 2016 and thereafter.
- **KR 3.5:** Increased recreational opportunities in the south side of the city are identified and developed by December 2018.

Strategic Priority 4: Image and Profile Key Results

- **KR 4.1:** Medicine Hat promotional agencies align behind a strong external brand and promote Medicine Hat with a unified external voice by December 2015 and thereafter.
- **KR 4.2:** Visitors increasingly choose Medicine Hat as a destination, and increasingly leave with a positive impression of the city by December 2014 and thereafter.
- **KR 4.3:** Citizens are increasingly positive ambassadors for Medicine Hat by December 2014 and thereafter.
- **KR 4.4:** Medicine Hat is increasingly viewed as a choice community and a great place to work, live and play by December 2016 and thereafter.

Strategic Priority 5: Key Results

- **KR 5.1:** The City's healthy balance sheet provides flexibility for the future by March 2015 and thereafter.
- **KR 5.2:** A risk tolerance framework is articulated and adopted by Council by September, 2014.
- **KR 5.3:** The City's sustainable equity pool continues to produce dividends by March 2014 and thereafter.

Strategic Priority 6: City Government Key Results

- **KR 6.1:** A high performance culture with clear accountabilities is in place in the City by December 2014.
- **KR 6.2:** Councilors are role models for excellence in governance by December 2014 and thereafter.
- **KR 6.3:** Increasingly efficient and effective customer-oriented service delivery is implemented in the City by December 2014 and thereafter.
- **KR 6.4:** Employee turnover is reduced and measurable increases in employee satisfaction are recorded by September 2014 and thereafter.
- **KR 6.5:** Council is a resource for strategic direction and advice to the CAO by September 2014 and thereafter.
- **KR 6.6:** The best organization structure for the City to move forward into the future is determined and implemented by December 2016.